



Department of Environmental Quality

Overview of State Electronic Waste Recycling Programs

Utah Legislature

Natural Resources, Agriculture, and Environment
Interim Committee

October 18, 2006



Electronics Reuse & Recycling Programs / Activities

Brief Overview:

- **Four State Programs**
- **National Landscape**
- **International Activities**

State Electronics Reuse & Recycling Programs – Overview

- **California**



- **Effective January 1, 2005**

- **Maine**



- **Effective January 1, 2006**

- **Maryland**



- **Effective July 1, 2005 through December 31, 2010**

- **Washington**



- **Effective July 1, 2006**

- **Implementation by January 1, 2009**

State Electronics Reuse and Recycling Key Elements

- **Who is involved (key stakeholders)?**
- **What is covered?**
- **Who pays? – When? How?**
- **How are items collected?**
- **How to ensure collected items are properly reused or recycled?**

State Electronics Reuse and Recycling Key Elements (cont.)

- *How to create/support recycling market?*
- *How to educate and inform?*
- *How to measure and report on activities and successes?*

State Electronics Reuse & Recycling Who is Involved (Key Players)?

- **Manufacturers**
 - **Original / Importers**
- **Retailers**
 - **National / Local**
- **Consumers**
- **Collection Centers**
 - **Private / Public**
- **Refurbishers / Recyclers**

State Electronics Reuse & Recycling

What is Covered?

- **Computer Equipment**
 - Monitors (CRTs), flat panel displays, CPUs, laptops
- **TVs**
 - CRTs, flat panel displays
- **Other Electronics (Future)**
 - Cell phones, PDAs, computer peripherals, audio/video equipment, plasma TVs

State Electronics Reuse & Recycling

What is Covered? (cont.)

- **California**

- Video displays 4” or more – CRTs (TVs, & computer monitors) and flat panel displays
- Other video display items can be added

- **Maine**

Households Only:

- CRTs (TVs & computer monitors)
- CPUs only if attached to monitor
- Covered items must carry manufacturer label

State Electronics Reuse & Recycling

What is Covered? (cont.)

- **Maryland**
 - **Computer monitors**
 - **CPUs**
 - **Laptops**
- **Washington**
 - **CRTs (TVs, & computer monitors)**
 - **CPUs**
 - **Laptops**

State Electronics Reuse & Recycling Who Pays and How? – Basic Options

- **Producer (Manufacturer) Responsibility**
 - **Maryland, Washington (can include retailer)**
- **Shared Responsibility (Manufacturer / Local Gov. / Collector)**
 - **Maine**
- **Point-of-Sale or Advanced Recycling Fee**
 - **California**
- **End-of-life Fee**
 - **Maine (option)**

State Electronics Reuse & Recycling

Who Pays and How? (cont.)

- **California**

- **Consumer at time of purchase (\$6 to \$10)**
- **Retailer may pay for consumer**

- **Maine**

- **Manufacturer: Pays consolidator**
- **Municipality: Pays for transportation to consolidator (excluding full 40' trailer)**
- **State offers grants to local government for collection infrastructure**

State Electronics Reuse & Recycling

Who Pays and How? (cont.)

- **Maryland**

- **Manufacturer: Annual registration fee**
- **2nd Year reduced if manufacturer has established a takeback program**
- **Grants available to local governments to support computer recycling**

- **Washington**

- **No cost to residents, schools, charities, small businesses & small governments**
- **Manufacturer: Compensates collectors**

State Electronics Reuse & Recycling

How are Items Collected?

- **California**
 - **Collectors must offer a “cost-free & convenient” collection outlet**
- **Maine**
 - **Communities collect & transport to approved private consolidation facilities**

State Electronics Reuse & Recycling

How are Items Collected? (cont.)

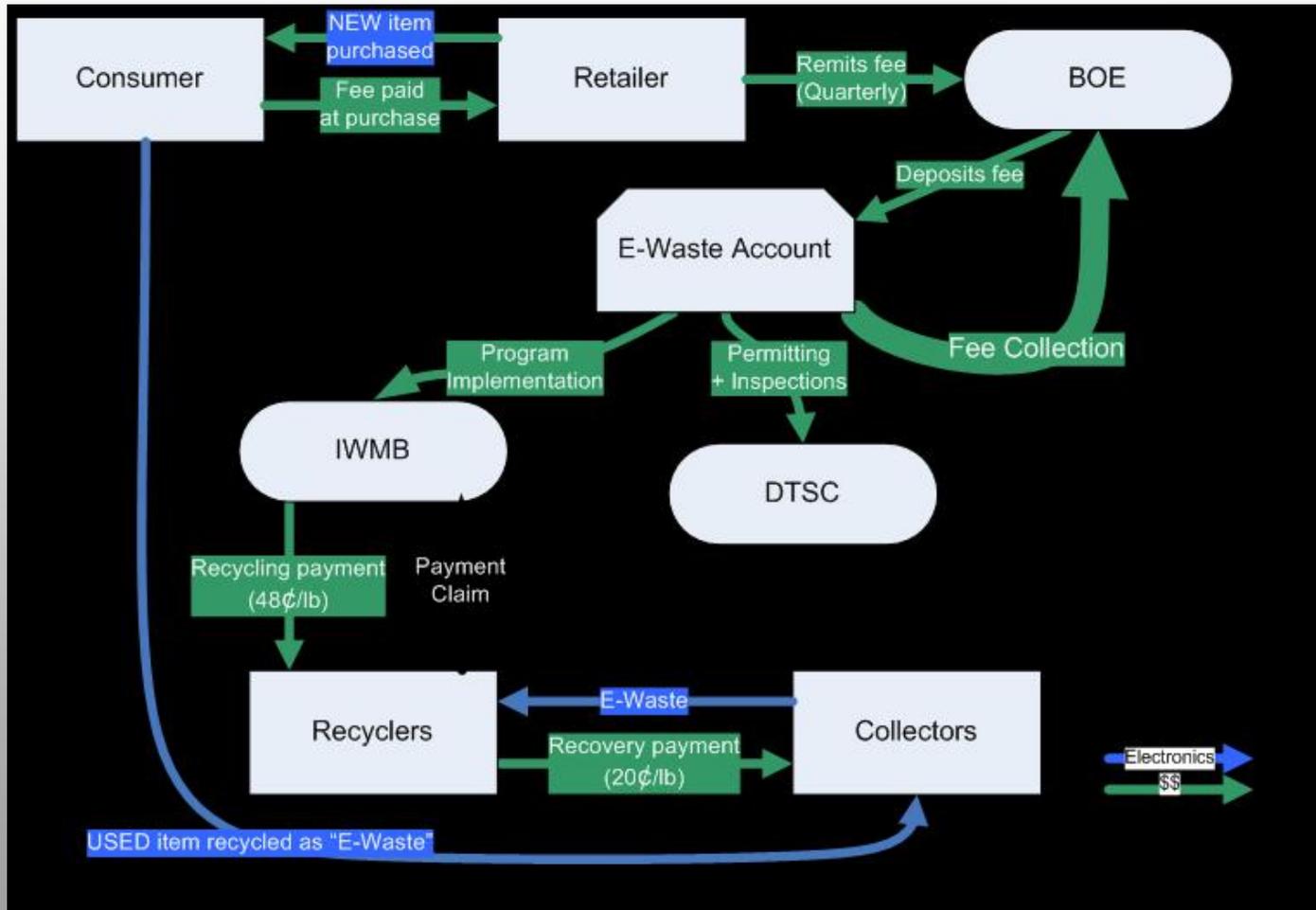
- **Maryland**
 - Half of MD's counties have established permanent collection facilities (4 additional facilities within a year)
 - Collection events
- **Washington**
 - Beginning Jan. 2009, manufacturers to establish collection program in each county (and each city pop. > 10,000)
 - Standard or approved independent recycling program
 - Standard program administered by TPO

State Electronics Reuse & Recycling

How are Collected Items Recycled?

- **California**
 - **Recyclers approved by state**
- **Maine**
 - **Recyclers meet standards established by state**
- **Maryland**
 - **No requirements regulating recyclers**
- **Washington**
 - **Processing standards required**

California Electronics Recycling Program – Flow Diagram



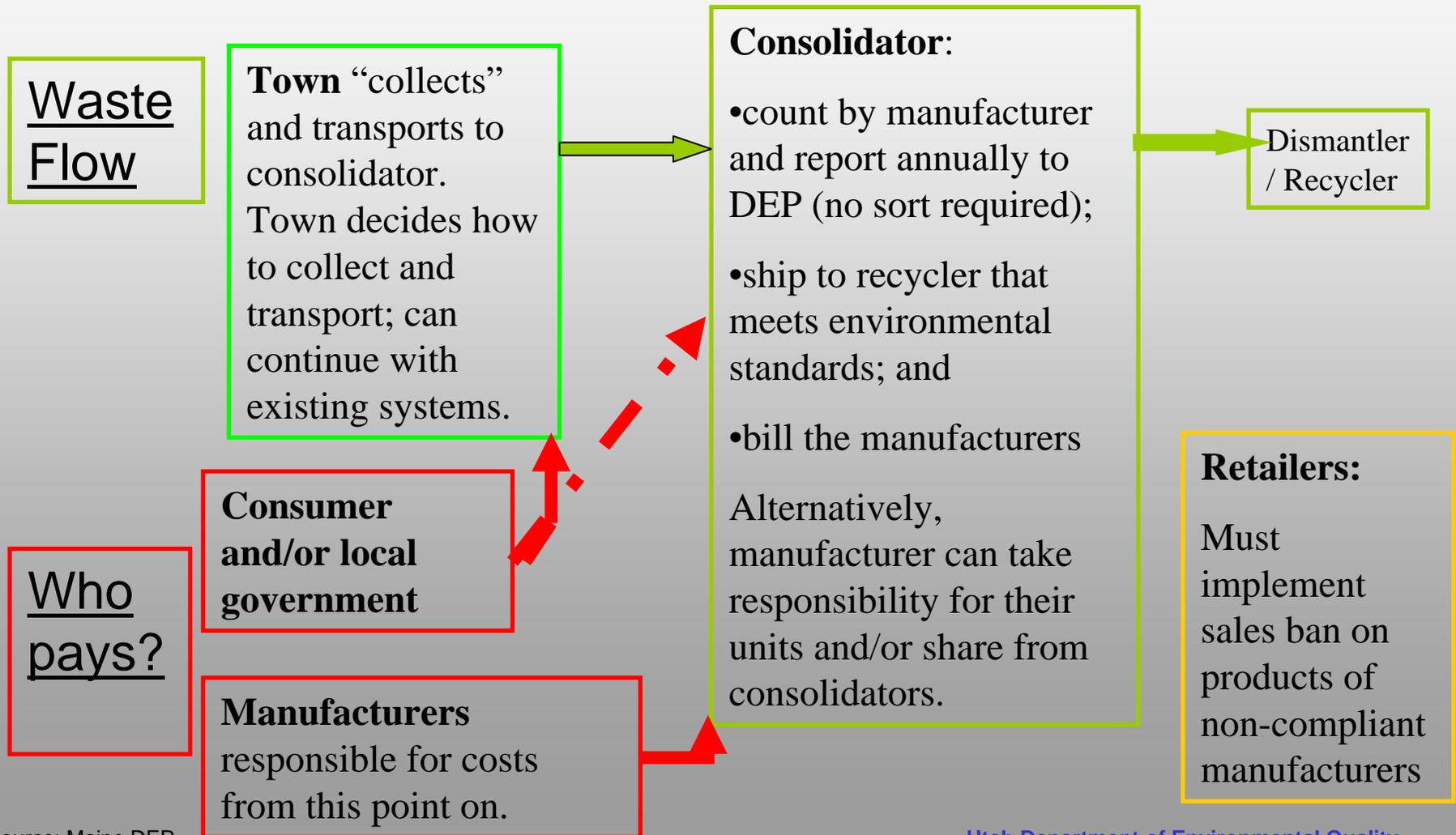
BOE = Board of Equalization

IWMB = Integrated Waste Management Board

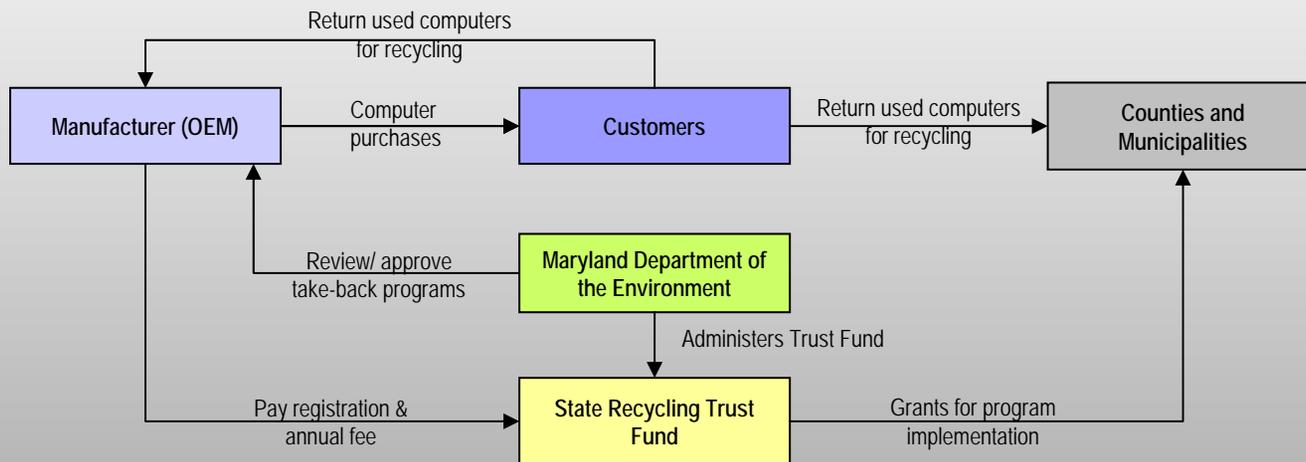
DTSC = Dept. of Toxic Substances Control

Source: CA Integrated Waste Management Board

Maine's Shared Responsibility Model for E-Waste Recycling



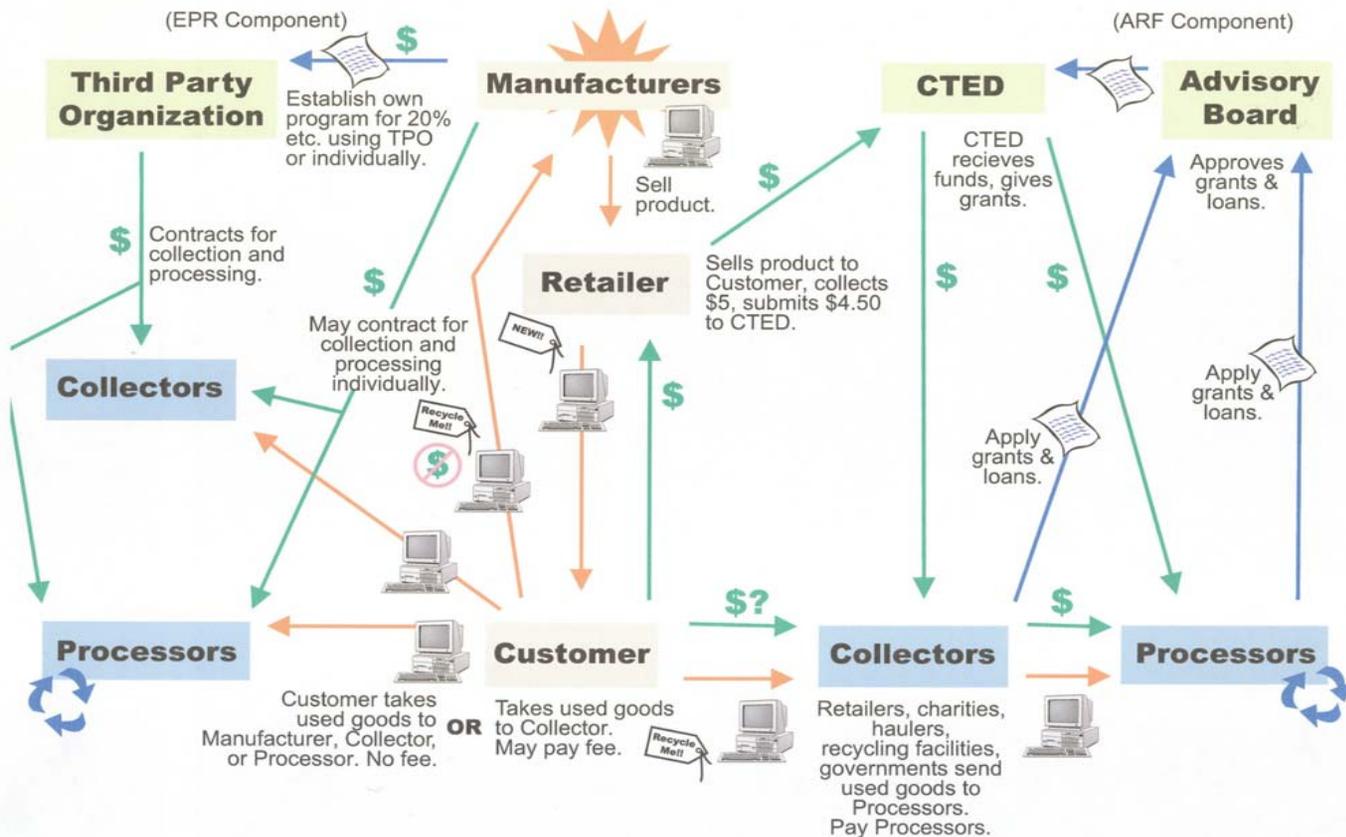
Maryland – Electronics Recycling Program



Source: Product Stewardship Institute

Washington Electronics Recycling Program – Flow Diagram

Washington State E-Waste Legislation



Source: Washington DOE

State Electronics Reuse & Recycling Information Resources

- **California**

- **California Integrated Waste Management Board (CIWMB)**

- www.ciwmb.ca.gov/electronics

- **CIWMB E-waste**

- www.erecycle.org

- **Maine**

- www.maine.gov/dep/rwm/ewaste

State Electronics Reuse & Recycling Information Resources (cont.)

- **Maryland**
 - www.mde.state.md.us/eCycling
- **Washington**
 - www.ecy.wa.gov/programs/swfa/ewaste

National Landscape

- **Congress**

- **Legislation (Introduced):**

- H.R. 320, H.R. 425, H.R. 4316
 - S. 510

- **Congressional E-waste Working Group**

- **EPA**

- **Final rule addressing CRTs (non-households)**

- **Plug-In to eCycling**

- **Federal Electronics Challenge (FEC)**

- **Electronic Product Environmental Assessment Tool (EPEAT)**

- **Trade Associations**

- **Information Sharing**

- **Standards / Certification for E-waste processors**

International Efforts

- **European Union**
 - **Design Standards**
 - Increase “recycle-ability”
 - Improve materials used (less toxic)
 - **Waste Electrical & Electronic Equipment (WEEE) Directive**
 - Takeback & recycling requirements
- **Canada**
 - **Alberta (TPO, ARF, e-roundups, municipal collection sites)**
- **Japan**
 - **TV Recycling**
 - **Design Standards**
- **Others**